

CLAIMS

SUB B1
1.

Method for gluing together two disc halves (5, 21) to produce a disc (23), for example an optical data carrier, such as a DVD, comprising the steps of:

- 5 - placing one disc half (5) on a rotary member (3, 4);
- applying a quantity of glue (20) to the disc half (5) in a central region thereof;
- placing the second disc half concentrically onto the first disc half (5), so as to enclose the glue (20);
- 10 - rotating the rotary member (3, 4) with the two disc halves (5, 21) in such a manner that, under the influence of the centrifugal force which is generated, the glue (20) spreads along an expanding front between the two disc halves (5, 21);
- stabilizing the glue which is immediately behind the glue front by means of
- 15 light radiation;
- curing the glue (20);
- removing the glued-together disc halves (5, 21) from the rotary member (3, 4) and the mandrel (6).

- 20 2. Method according to Claim 1, comprising the step of stabilizing the glue behind the glue front by means of UV light radiation.

Suba'

- 25 3. Method according to Claim 1 or 2, for gluing together two disc halves (5, 21) which are each provided with a central hole (6), comprising the steps of:
 - placing one disc half (5) on a rotary member (3, 4) provided with a mandrel (7) in such a manner that the mandrel (7) fits through the central hole (6) in the said disc half (5);
 - expanding the mandrel (6) in such a manner that it comes to bear flush against the wall of the central hole (5) of the disc half which was put in
 - 30 place first;
 - then applying the quantity of glue (20) to the said disc half (5);
 - placing the second disc half concentrically onto the first disc half (5) over the mandrel (6), so as to enclose the glue (20);

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- rotating the rotary member (3, 4) with the two disc halves (5, 21) in such a manner that, under the influence of the centrifugal force which is generated, the glue (20) spreads along an expanding front between the two disc halves (5, 21);
- stabilizing the glue which is immediately behind the glue front by means of light radiation;
- curing the glue (20);
- removing the glued-together disc halves (5, 21) from the rotary member (3, 4) and the mandrel (6).

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4. Method according to Claim 1, 2 or 3, comprising the step of providing a mandrel (6) which has a relatively hard core (8) and a flexible sleeve which surrounds the core (18), and expanding the sleeve (12) by means of compressed air.

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5. Method according to one of the preceding claims, comprising the steps of:

- putting the first disc half (5) in place;
- then expanding the mandrel (6);
- then applying glue (20) to the first disc half (5);
- then placing the second disc half (21) over the expanded mandrel (6), taking with it any glue (20) adhering thereto.

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6. Device for gluing together two disc halves (5, 21) to produce a disc (23), for example an optical data carrier such as a DVD, using the method according to one of Claims 1-5, comprising a rotatable carrier (3, 4) on which the disc halves (5, 21) can be accommodated, characterized in that a light radiation source is provided which emits a light beam for curing the glue.

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7. Device according to claim 6, wherein the light beam can be displaced in the radial direction with respect to the mandrel.

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8. Device according to Claim 6 or 7 for gluing together two disc halves (5, 21) which are each provided with a central hole (6), in which the carrier (3, 4) is

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cont.

Suba²

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provided with a mandrel (6) which can be fitted through the central holes (5) in the disc halves, the mandrel (6) being expandable in the radial direction.

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9. Device according to Claim 7 or 8, in which the mandrel (6) comprises a central core (8) and a flexible sleeve (12) which is connected to the core (8) in an airtight manner, which core (8) has an air-supply duct (9, 10) which opens out into the interior of the flexible sleeve (12).

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10. Device according to Claim 7, in which the mandrel (6) comprises a cylindrical core (8) provided with a central air-supply duct (9) to which at least one radial transverse duct (10), which opens out on the outer surface of the core (8), is connected.

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11. Device according to Claim 10, in which the core (8) comprises a constricted region (11) in which the sleeve (12) is accommodated.

12. Device according to Claim 11, in which the sleeve is clamped in at both ends between a clamping ring (15, 16).

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13. Device according to one of Claims 6-12, in which the sleeve (12) has at least one internal recess (13) and the mandrel (6) has at least one corresponding ridge (14) which engages in the recess (13).

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